

**Amendments to the Claims:**

The following claims will replace all prior versions of the claims in this application (in the unlikely event that no claims follow herein, the previously pending claims will remain):

1. (Currently Amended) A photosensitive composition comprising:
  - (a) 30-70% by weight of an epoxide-containing material;
  - (b) 5-35% by weight of an acrylic material selected from aromatic acrylic material, cycloaliphatic acrylic material, or combinations thereof;
  - (c) 0-40% by weight of a hydroxyl-containing material;
  - (d) at least one cationic photoinitiator; and
  - (e) at least one free-radical photoinitiator,

wherein a ratio of epoxy equivalents to hydroxy equivalents in the composition is in the range of from 1.5 to 3.8

~~wherein said composition, after exposure to actinic radiation, has:~~

- ~~(i) an elongation at yield in the range of 7% to no yield;~~
- ~~(ii) a tensile modulus in the range of 1000 to 1600 N/mm<sup>2</sup>;~~
- ~~(iii) an average elongation at break of at least 10%; or~~
- ~~(iv) a yield stress of 28 to 40 N/mm<sup>2</sup>.~~

2. (Currently Amended) The composition of claim 1, wherein the epoxide-containing material is selected from bis(2,3-epoxycyclopentyl)ether, 2,3-epoxycyclopentyl glycidyl ether, 1,2-bis(2,3-epoxycyclopentyl)oxy)ethane, bis(4-hydroxycyclohexyl)methane diglycidyl ether, 2,2-bis(4-hydroxycyclohexyl)propane diglycidyl ether, diglycidyl ether of neopentyl glycol, 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane, 3,4-epoxy-6-methylcyclohexylmethyl-3,4-epoxy-6-methylcyclohexanecarboxylate methylcyclohexanecarboxylate, di(3,4-epoxycyclohexylmethyl)hexanedioate, di(3,4-epoxy-6-methylcyclohexylmethyl)hexanedioate, ethylenebis(3,4-epoxycyclohexanecarboxylate), ethanedioldi(3,4-epoxycyclohexylmethyl)ether, vinylcyclohexene dioxide, dicyclopentadiene diepoxide, 1,2-epoxytetradecane, a di(oxiranyl) poly(oxy-1,4-butanediyl), a partially acrylated bisphenol A epoxy, and 2-(3,4-epoxycyclohexyl-5,5-spiro-3,4-epoxy)cyclohexane-1,3-dioxane, and

combinations thereof.

3. (Currently Amended) The composition of claim 1, wherein the acrylic material is selected from 1,4-dihydroxymethyl-cyclohexane diacrylate, bisphenol A diacrylate, ~~trimethylolpropane triacrylate~~, and ethoxylated bisphenol A diacrylate and combinations thereof.
4. (Original) The composition of claim 1, wherein the hydroxyl-containing material is selected from 1,4-cyclohexanedimethanol, aliphatic and cycloaliphatic mono hydroxy alkanols, an aliphatic polycarbonate diol, and linear and branched polytetrahydrofuran polyether polyols, and combinations thereof.
5. (Original) The composition of claim 1, wherein the free-radical photoinitiator is a 1-hydroxyphenyl ketone.
6. (Original) The composition of claim 1, wherein the free-radical photoinitiator is selected from an alpha-hydroxyphenyl ketone, benzil dimethyl ketal or 2,4,6-trimethylbenzoyldiphenylphosphine oxide.
7. (Original) The composition of claim 1, wherein the composition comprises 32-48% by weight of an epoxide-containing material.
8. (Original) The composition of claim 1, wherein the composition comprises 10-20% by weight of an acrylic material selected from aromatic acrylic material, cycloaliphatic acrylic material, or combinations thereof.
9. (Original) The composition of claim 1, wherein the composition comprises 10-39% by weight of a hydroxyl-containing material.
10. (Original) The composition of claim 1, wherein the composition comprises 35-69.9% by weight of an epoxide-containing material, 10-20% by weight of an acrylic material selected from aromatic acrylic material, cycloaliphatic acrylic material, or combinations thereof, and 10-39% by weight of a hydroxyl-containing

material.

11. (Original) The composition of claim 10, wherein the epoxide-containing material includes 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate, 1,2-epoxytetradecane, diglycidyl ether of neopentyl glycol, or  $\alpha$ -(oxiranylmethyl)- $\Omega$ -(oxiranylmethoxy) poly(oxy-1,4-butanediyl), or combinations thereof.

12. (Original) The composition of claim 1, wherein the hydroxyl-containing material includes a polytetrahydrofuran polyol, 1,4-cyclohexanedimethanol, or an aliphatic polycarbonate diol, or combinations thereof.

13. (Currently Amended) A three-dimensional article formed from a photosensitive composition comprising:

- (a) 30-70% by weight of an epoxide-containing material;
- (b) 5-35% by weight of an acrylic material selected from aromatic acrylic material, cycloaliphatic acrylic material, or combinations thereof;
- (c) 0-40% by weight of a hydroxyl-containing material;
- (d) at least one cationic photoinitiator; and
- (e) at least one free-radical photoinitiator,

wherein a ratio of epoxy equivalents to hydroxy equivalents in the composition is in the range of from 1.5 to 3.8

~~wherein the article has:~~

- ~~(i) an elongation at yield in the range of 7% to no yield;~~
- ~~(ii) a tensile modulus in the range of 1000 to 1600 N/mm<sup>2</sup>;~~
- ~~(iii) an average elongation at break of at least 10%; or~~
- ~~(iv) a yield stress of 28 to 40 N/mm<sup>2</sup>.~~

14. (Original) The article of claim 13, wherein the composition comprises 35-69.9% by weight of an epoxide-containing material, 10-20% by weight of an acrylic material selected from aromatic acrylic material, cycloaliphatic acrylic material, or combinations thereof, and 10-39% by weight of a hydroxyl-containing material.

15. (Original) The article of claim 13, wherein the epoxide-containing material

includes 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate, 1,2-epoxytetradecane, diglycidyl ether of neopentyl glycol, or  $\alpha$ -(oxiranylmethyl)- $\Omega$ -(oxiranylmethoxy) poly(oxy-1,4-butanediyl), or combinations thereof.

16. (Original) The article of claim 13, wherein the hydroxyl-containing material includes a polytetrahydrofuran polyol, 1,4-cyclohexanedimethanol, or an aliphatic polycarbonate diol, or combinations thereof.

17. (Currently Amended) A process for forming a three-dimensional article comprising:

- (1) coating a layer of a composition onto a surface, the composition comprising:
  - (a) 30-70% by weight of an epoxide-containing material;
  - (b) 5-35% by weight of an acrylic material selected from aromatic acrylic material, cycloaliphatic acrylic material, or combinations thereof;
  - (c) 0-40% by weight of a hydroxyl-containing material;
  - (d) at least one cationic photoinitiator; and
  - (e) at least one free-radical photoinitiator,
- (2) exposing the layer imagewise to actinic radiation to form an imaged cross-section, wherein the radiation is of sufficient intensity to cause substantial curing of the layer in the exposed areas;
- (3) coating a layer of the composition onto the previously exposed imaged cross-section;
- (4) exposing said thin layer from step (3) imagewise to actinic radiation to form an additional imaged cross-section, wherein the radiation is of sufficient intensity to cause substantial curing of the thin layer in the exposed areas and to cause adhesion to the previously exposed imaged cross-section;
- (5) repeating steps (3) and (4) a sufficient number of times in order to build up the three-dimensional article,

wherein a ratio of epoxy equivalents to hydroxy equivalents in the composition is in the range of from 1.5 to 3.8

wherein the article has:

- ~~(i) an elongation at yield in the range of 7% to no yield;~~
- ~~(ii) a tensile modulus in the range of 1000 to 1600 N/mm<sup>2</sup>;~~
- ~~(iii) an average elongation at break of at least 10%; or~~
- ~~(iv) a yield stress of 28 to 40 N/mm<sup>2</sup>.~~

18. (Original) The process of claim 17, wherein the actinic radiation is in the range of 280-650 nm.

19. (Currently Amended) The process of claim 17 wherein the exposure energy is in the range of 10-150 ~~mJ/cm~~ mJ/cm<sup>2</sup>.

20. (Original) The process of claim 17, wherein the epoxide-containing material includes 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate, 1,2-epoxytetradecane, diglycidyl ether of neopentyl glycol, or  $\alpha$ -(oxiranylmethyl)- $\Omega$ -(oxiranylmethoxy) poly(oxy-1,4-butanediyl), or combinations thereof and the hydroxyl-containing material includes a polytetrahydrofuran polyol, 1,4-cyclohexanedimethanol, or an aliphatic polycarbonate diol, or combinations thereof.